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**Assignment:** 2

**Task number:** 7

**Task description:**

**Break-through**

Break-through is a two-player game, played on a board consists of  $n \times n$  fields. Each player has  $2n$  dolls in two rows, placed on at the player's side initially (similarly to the chess game, but now every dolls of a player look like the same). A player can move his doll one step forward or one step diagonally forward (can't step backward). A player can beat a doll of his opponent by stepping diagonally forward onto it. A player wins when his doll reaches the opposite edge of the board. Implement this game, and let the board size be selectable (6x6, 8x8, 10x10). The game should recognize if it is ended, and it has to show in a message box which player won. After this, a new game should be started automatically.

**Description of each method:**

**showExitConfirmation()** -> confirms with the message before shutting down the window

**doUponExit()** -> closes the window

**getActionListener(size)** -> creates boards with the given size in a new window

**getWindowList()** -> returns list of windows

**Model(size)** -> creates model of the board

**getPlayer(i, j)** -> returns place of the player in the board

**switchPlayer()** -> switches places of players X and Y

**step(row, column)** -> logic of the game, shows possible ways in gray color for each element of the board while it was clicked(forward, diagonally)

**move(row, col)** -> moves to forward or diagonally

**findWinner()** -> returns the player who reached the opposite edge of the board

**getActualPlayer()** -> returns the actual player who is playing that moment

**eraseColoreds()** -> erases the gray color after movement of the player

## UML Class Diagram:

